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Follow-up Analysis
of
The Final EIR
on
A Proposed Flood Control Project
for
Guadalupe River
(Blossom Hill Road to Almaden Expressway)

by

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Follow-up Environmental Impact Evaluation of the Guadalupe River (Blossom Hill-Almaden) EIR

A. Introduction

1. Purpose of This Evaluation

This study was made to evaluate the effectiveness of the mitigation measures and accuracy of the impact predictions discussed in the Final Environmental Impact Report on A Proposed Flood Control Project for the Guadalupe River (Blossom Hill Road to Almaden Expressway), October, 1975.

2. Brief Description of the Project Being Assessed

The project was designed to provide 1% flood protection for the Guadalupe River in the reach beginning near Blossom Hill Road to the confluence of Guadalupe Creek and Alamitos Creek (a distance of 3,100 feet) located in south San Jose near the Almaden Valley.

The construction consisted of the following structural measures: In the reach beginning near the Blossom Hill Road bridge upstream to the northern edge of the Alamitos Percolation Pond (1,300 feet), the first 500 feet of channel was enlarged and then the side slopes were gabion-lined and the channel bottom was rock-lined to provide erosion control. Upstream of this section the west bank was excavated and widened to increase capacity. An 18-foot-wide maintenance road was also constructed on this side of the river. The existing channel bottom and the east bank were not excavated in order to preserve the existing well-diversified riparian plant community.

A new and larger concrete drop structure was constructed to replace the old inadequate drop structure. The channel was rock-lined downstream and upstream of the new structure for a short distance to prevent localized erosion.

Upstream of the structure, the capacity of the channel was increased by raising the old 1,700-foot levee along the west bank and constructing a new low levee along the east bank.

At the confluence area a portion of Alamitos Creek and Guadalupe Creek was excavated and widened to increase capacity.

Finally, a new 3-acre percolation pond was built immediately north of the Alamitos Percolation Pond to provide additional groundwater recharge. A portion of the pond was designed and will be landscaped to establish a wildlife habitat area which will mitigate the damage caused by the flood control project.

Construction of this project began on July 26, 1976 and was completed December 22, 1976; however, the official notice of completion has not yet been filed.

B. Summary and Discussion of the Impacts

1. Table Summarizing Predicted and Actual Impacts

Before considering these impacts, it is particularly important to remember the abnormally dry year during which this project was constructed.

The following table summarizes the short-and long-term impacts predicted in the EIR and compares them to the actual impacts of the project:

GENERAL IMPACTS

Predicted in EIR	Actual Impacts
Short-Term	
1. Short-term erosion and sedimentation will likely occur because of the project.	1. Very little erosion or sedimentation has been observed. No measurements were made.
2. Seismic shaking may cause lateral spreading in the trapezoidal section where the old slime pond existed.	2. Lateral spreading and slope failure occurred in this area during construction; however, it resulted from poor slope and soil strength, not seismic activity.
3. Project construction will destroy a recharge test facility, located near the west bank, downstream of the drop structure. A new facility will be constructed at a new location.	3. This facility was destroyed; it has not yet been replaced.
4. Water pollution will be minimized during construction.	4. This was done; all imported water through the site was halted.
5. The cut slopes will be reseeded promptly after project construction to reduce erosion.	5. This was not done. Drought conditions have precluded significant water erosion.
6. Local air quality will be reduced during construction from dust and exhaust gas emissions.	6. This did appear to occur, but dust was minimized by frequent water applications to bare areas during actual construction activities. No measurements were made of air quality.
7. Ambient noise levels will be exceeded during actual construction.	7. Although noise level measurements were not taken, construction equipment could be clearly heard from the Administration Building much of the time it was operating. However, construction noise varied depending on the current activities. People living adjacent to the new pond. were probably annoyed by the noise although no survey was made.
Long-Term	
1. Project design should not cause any long-term erosion problems.	1. This problem, if it exists, is yet to be felt, because of the drought.

Predicted in EIR (Con't)	Actual Impacts (Con't)
2. Long duration, high intensity seismic ground shaking may cause the common levee between the Alamitos Pond and the River to fail.	2. This has yet to be tested; no substantial seismic activity has occurred.
3. Channel excavation may reduce percolation in the river below the drop structure (rock-lined section).	3. Little significant runoff has occurred this year so this possible effect has not been established.
4. Enlarging the levee into Alamitos Pond may reduce the pond's percolation capacity.	4. The pond has not been full long enough to determine any lost capacity; the lost percolation capacity may also be too small to measure.
5. Four structures used by the Valley View Packing to house seasonal migrant laborers will be removed by the project and will not be replaced.	5. The structures were not removed.
6. The project will free the surrounding area from the 1% flood threat, with its potential public service interruptions.	6. No 1% flood has yet occurred to test the design.
7. The project is estimated to cost $880,000. The bid was $722,789.	7. The actual cost was $669,770.05.
8. The project construction will not cause any traffic disruptions.	8. There were no traffic disruptions resulting from project construction.
9. No major relocations of power poles, service water lines, or gas pipelines are expected to result from project construction.	9. None occurred.
10. Landscaping will be initiated as soon as each section of the project is completed.	10. This has not yet been done.
11. The gabion riprapping will be a long-term adverse aesthetic impact.	11. The gabioned area has been constructed with a number of tree planters located along the slopes to help reduce this impact in the long-term. Plantings have not yet been done.

Predicted in EIR (Con't)	Actual Impacts (Con't)
12. The new drop structure will be larger and possibly more obtrusive than the one it replaces. However, it will be tan-colored and architecturally surface-treated to improve its appearance.	12. The new drop structure although larger than the old one is not necessarily more obtrusive. It was colored tan; however, the surface texturization was poorly finished, thus not accomplishing its intended purpose.
13. Project design provides a walkway along the channel for passive recreation.	13. This is a part of the finished project; people have already been observed walking along the path.
14. The new drop structure will be either a rubber dam or flashboard type to provide a favorable water surface upstream in the proposed park.	14. The finished drop structure is a flashboard dam type. There has not been sufficient water this year to check the water surface level upstream in the proposed park site. It is anticipated, though, that the proper water levels will be achieved.

BIOLOGICAL IMPACTS

Predicted in EIR	Actual Impacts
Short-Term	
1. Reduction of total biological habitat in the construction area.	1. Total biological habitat was indeed reduced.
2. Temporary abandonment of project area by wildlife during construction.	2. Very little wildlife observed during construction; however, the number of gulls present as the Alamitos Recharge Pond level neared the bottom increased. They were looking for stranded fish.
3. Removal of about two acres of vegetation.	3. At least that amount was removed.
4. Fish in Alamitos Recharge Pond will be seined and transferred to another area.	4. Most fish were abandoned; goldfish were caught by children and sold to local pet shops. Some game fish were captured by individuals.
5. Degraded water quality.	5. Water quality degradation has largely not occurred because of the water shortage. The water quality problem may still occur during the next normal winter; however, degraded water is a normal winter occurrence.
6. Channel bottom excavation between the drop structure and Almaden Expressway will remove some hydrophillic weeds.	6. This was done, however expected reestablishment has not really occurred because of the drought.
Long-Term	
1. Lost habitat in the rock and gabion-lined areas.	1. This habitat has been eliminated; some may return as the rocks fill in with dirt to provide more suitable growing conditions.
2. Four 6-inch-diameter monterey pines are to be transplanted from the east bank near the Coyote-Alamitos Canal outfall to accommodate the new levee/maintenance road.	2. These trees were removed, but not transplanted as expected. The Landscape Architect advised it would not be successful. The landscaping program will include suitable replacements.

Predicted in EIR (Con't)	Actual Impacts (Con't)
3. Two one-foot-diameter pepper trees and one one-foot-diameter monterey pine would be removed from the east bank to accommodate the new drop structure and levee/maintenance road.	3. The trees were removed.
4. A large willow tree near the drop structure on the east bank will be trimmed so it won't intrude into the drop structure construction area.	4. The tree was trimmed.
5. Change of an open weedy field to a freshwater pond habitat.	5. Although the pond has been excavated, the drought has precluded filling the pond. Many of the same weed species are reestablishing in the excavated areas.
6. Loss of some shade and deeper pools in the rock-lined portions of the area downstream of the drop structure.	6. The excavation, vegetation removal, and rock-lining has eliminated the shade and pool areas. This impact is yet to be felt because the drought has dried up the river.
7. The valuable riparian habitat immediately downstream of drop structure will be preserved.	7. Some encroachment into this habitat was made in the area just downstream of the new drop structure. Excavated material was piled up at the upstream end of this area, covering about 20-30 feet of vegetation.
8. Reduced wildlife populations resulting from project construction.	8. Reduced vegetation appears to have reduced the numbers and variety of wildlife. However, it is difficult to attribute this problem entirely to the project. The combined drought conditions, lack of water for percolation ponds and the river, have significantly reduced plant populations in the project area. These conditions would have been minimized by a normal rainfall during the winter months.

2. Adequacy of EIR Impact Predictions:

Approximately thirty-five impacts were identified in the EIR. Slightly less than two-thirds of these impacts were correctly predicted, as observed during and following project construction.

Roughly, one-third of the predicted impacts have not yet been evaluated. This is due in large measure to the unusually dry year. Lack of water has postponed some impacts and intensified others.

- About one-sixth of the impacts were incorrectly predicted. This year's drought was responsible for postponing the landscaping project which should have immediately followed construction. Lack of rain has also significantly retarded natural revegetation.
- Four structures owned by the Valley View Packing Company were predicted to be removed; however, they were not. This final design change was not reflected in the EIR. These will be removed when the present occupant no longer needs them. This was done to reduce economic and social impacts.
- The Engineer's Report and EIR estimated the project cost to be higher than the accepted bid; actual cost was even lower due to cost-saving changes made during construction.
- The EIR stated that game fish would be seined from the Alamitos Recharge Pond and transferred to another suitable area. The non-game fish would be released into the Guadalupe River. All the fish were abandoned. The Department of Fish and Game alleged the fish were contaminated with mercury.

However, many of the game fish were captured by people, presumably to eat. Nearly all the goldfish were netted by children who sold the fish to local pet stores.

- Four six-inch-diameter monterey pines were to be transplanted from the east bank of the Guadalupe River near the Coyote-Alamitos Canal outfall to a suitable location. The trees were removed instead of transplanted. They will be replaced later when the project is landscaped.
- Some impacts predicted in the EIR were partially correct. It was stated that the slopes in the trapezoidal section at the old slime ponds might fail during seismic shaking. Although no significant seismic events have occurred since project construction began, the slope failed from lateral spreading, poor soil strength, and improper construction techniques by the contractor.
- The EIR pointed out that the new drop structure, since it would be larger than the old one, might be more obtrusive. To reduce this problem the new drop structure was to be tan-colored and architecturally surface-treated to improve its appearance. The tan coloring was included, and the surface was sandblasted to expose the aggregate; however, this procedure was not effective. The new structure is not necessarily more obtrusive, even though it's larger; the tan coloration helps reduce its visual impact.
- The EIR predicted that the valuable riparian habitat downstream of the drop structure would be preserved. Most of it was, but the excavation and clearing for the new drop structure removed about 20-30 feet (about 5%) more of the vegetation than was anticipated.

- To minimize the hazard of people drowning in the new pond the side slopes were supposed to be very gradual. Most are, but the west side is extremely steep and not fenced, creating a distinct hazard. Furthermore, the steep sides are in the deepest part of the pond, compounding the hazard.

  The Alamitos Recharge Pond has been dry much longer than anticipated, resulting from the drought.

- The new pond was also to have had two distinct parts, a highly permeable recharge facility in the deep portion and a shallow, impermeable wildlife mitigation portion. The completed project has successfully accomplished this goal.

C. Summary, Discussion and Success of the Mitigation Measures

- Some of the mitigation measures have either not yet been implemented or have not operated long enough to evaluate their effectiveness. For example, no landscaping has been done; and the new recharge/wildlife pond was not full long enough to accomplish its intended purpose of mitigating habitat lost to channel excavation. Likewise, the possible lost percolation capacity in the Alamitos Recharge Pond and the Guadalupe River may or may not have been offset by the new recharge pond. It was not operated long enough to determine percolation rates.
- The contractor was required to provide dust control measures to minimize blowing dust and particulates. All roads were regularly sprinkled with water during construction to help alleviate this problem. However, revegetation has not yet been done which would have helped reduce wind erosion; this does not appear to have been a significant problem, though. We assume that construction equipment was properly turned to minimize exhaust emissions, but this was not monitored.
- Construction was to have been done during the dry months to minimize the erosion potential from bare slopes. Although construction was done partly during the winter months there was very little rain, so water quality was probably not significantly affected; however, it was not monitored. There were no observed spills of chemicals or fuels during construction. Furthermore, water flowing through the site due to releases was stopped.

- All temporary facilities established during construction were removed upon project completion.
- Earth stockpiles and spoil areas were to be protected during wet weather; no significant wet weather occurred during project construction.
- All motorized construction equipment was to be equipped with effective, properly-maintained mufflers to reduce noise annoyance to adjacent residents. Project construction was also to be limited to daylight hours to minimize adverse noise impacts. Construction equipment was not checked by the District for adequate mufflers. Since construction noise was not monitored, it is not possible to determine if effective noise controls were used. Construction was apparently limited to daylight hours.
- The EIR suggested that the amount of energy consumed by project construction could be reduced if the contractors were required to submit energy conservation proposals with their bids. The District could then use this as one basis for selecting a contractor. Energy use for project construction was not monitored. The construction contractors were not required to submit or use energy conservation measures. Although at first glance this suggested mitigation measure appears to have been ineffective, it is important to add that since it is uneconomical for the contractor to use more energy fuel than necessary, he is not likely to use more than required to fulfill the terms of his contract.
- All cut slopes were to be revegetated immediately after construction. The unusually dry conditions have precluded

installation of landscaping. Thus, this mitigation measure and its effect cannot be evaluated at this time.

D. Conclusions and Recommendations

Generally, most of the impacts predicted in the EIR did occur as anticipated. However, as noted, there were exceptions.

On the other hand, predicted impacts related to water being present have not yet occurred. It will not be possible to evaluate whether these predictions were accurate until water returns. These impacts include erosion, sedimentation, and, in a larger sense, revegetation and wildlife reestablishment.

The new recharge/wildlife pond, which would have converted a waste field into a freshwater pond, has not really been operated as a pond because the lack of water has precluded keeping it full. Instead, the original waste field, populated with common weeds, has been converted to a large hole, filled with essentially the same weeds; however, when sufficient water is again available, the pond should fulfill its design concept.

This pond was also to have a deep, highly permeable recharge portion and a shallow impermeable wildlife reestablishment area. This aspect of the project has so far been very successful. The recharge portion operates as expected; and the shallow, impermeable area functions well also. When the pond is refilled and vegetation becomes established, the area's biological productivity should be enhanced.

The accuracy of long-term impact predictions cannot be evaluated at this time. These include the effects of seismic activity, 1% flood protection, long-term erosion problems, reduced percolation capacity in the pond and river, increased public safety problems (associated with the new pond), long-term adverse aesthetic impacts, success of revegetation in the rock-lined and gabioned areas, and reduced wildlife populations.

Some of the impacts predicted in the EIR were not monitored, such as the effects of construction noise on adjacent residents. Related to monitoring is the lack of some base-line data. For example, the EIR stated that water quality could be expected to degrade the temporarily following project construction; however, no water samples were taken prior to construction for comparison. This problem is also true for the project's effects on fish populations, changes in ambient air quality, and increases in noise levels during construction.

Some inaccurately predicted impacts indicate poor communication between different groups involved with the project. For example, the four structures predicted for removal which were not taken out, the abandoned fish in the Alamitos Recharge Pond, and the four monterey pines which should have been transplanted but were removed.

Perhaps site monitoring for noise, air, and water pollution should be considered in future construction projects to identify what magnitude these pollutant sources are contributing above ambient conditions. Such monitoring may also suggest methods for reducing various pollutants to more acceptable levels if deemed necessary.

Although project construction was done under generally dry conditions, thus minimizing many adverse impacts under this contract, the work would normally have been done into the rainy season. It is not clear why this occurred. Construction should preferably have been scheduled for the spring and summer months. Then the landscaping would have logically followed in the fall and winter months.

Finally, it seems that the EIR should be more carefully reviewed by those people involved in preparing the construction and contract details. This would ensure a full understanding of design intentions for the mitigation measures. It would also ensure that proposed mitigation measures are reasonable, from a construction standpoint.